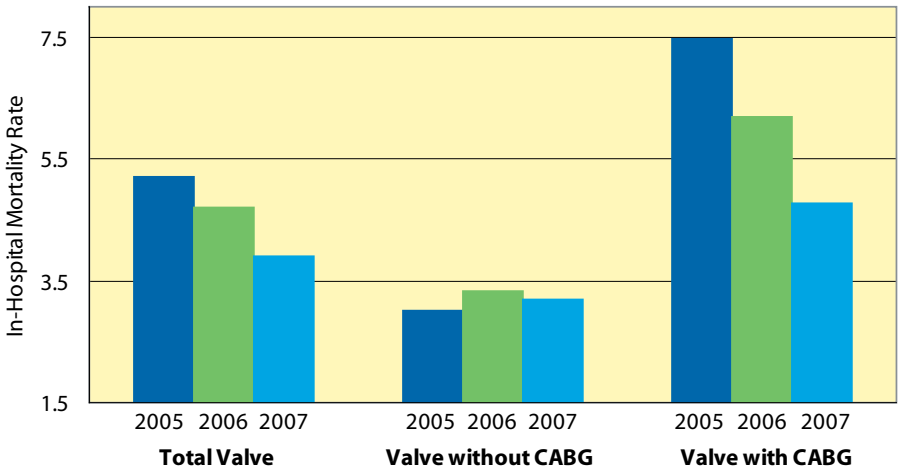
Key Findings

Mortality – Valve Surgery

- From 2005 (the first year that valve surgeries were reported) to 2007, in-hospital mortality for the total valve reporting group (i.e., valve procedures with or without a CABG procedure) dropped 23.9 percent, from 5.15 percent in 2005 to 3.92 percent in 2007.

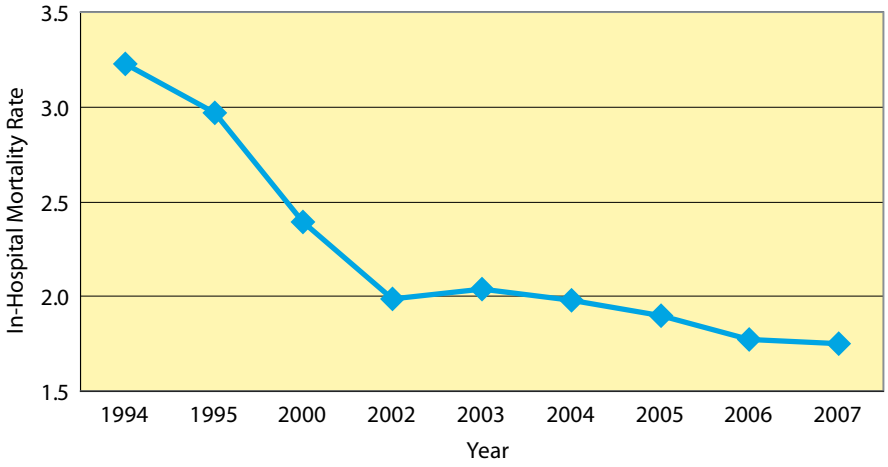
- Valve without CABG in-hospital mortality rates increased from 3.02 percent in 2005 to 3.33 percent in 2006 and then decreased to 3.19 percent in 2007.
- Valve with CABG in-hospital mortality rates had the largest decrease, 36.1 percent, from 7.47 percent in 2005 to 4.77 percent in 2007.



Note: This table includes data for each year that PHC4 published analysis for valve procedures.

Mortality – CABG Surgery

- For patients undergoing coronary artery bypass graft (CABG) procedures (without a valve procedure), in-hospital mortality rates declined slightly from 1.77 percent in 2006 to 1.75 percent in 2007. CABG mortality rates have dropped 45.8 percent since 1994.



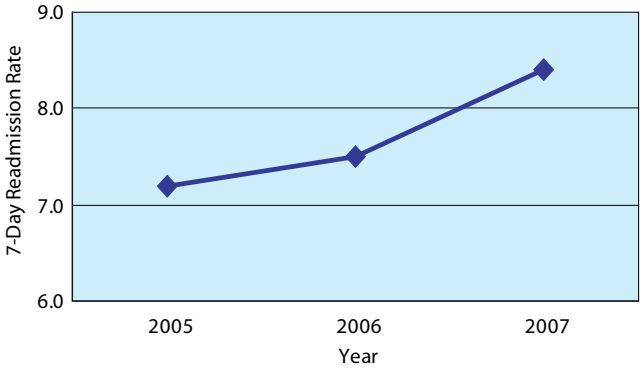
Note: This table includes data, beginning with 1994, for each year that PHC4 published analysis for CABG procedures.

Key Findings

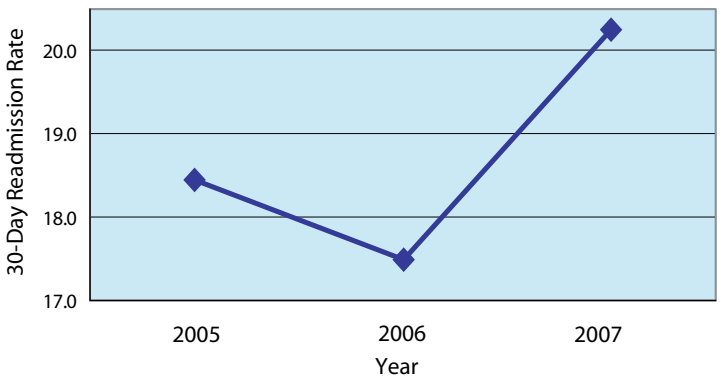
Readmissions – Valve Surgery

- For the total valve reporting group (i.e., valve procedures with or without a CABG procedure), 7-day readmissions increased between 2005 and 2007, from 7.17 percent in 2005 to 7.49 percent in 2006 to 8.38 percent in 2007.
- Thirty-day readmissions for the total valve reporting group (i.e., valve procedures with or without a CABG procedure) decreased between 2005 and 2006 (18.44 percent to 17.50 percent) and then increased in 2007 to 20.26 percent.

7-Day Readmissions for Total Valve



30-Day Readmissions for Total Valve



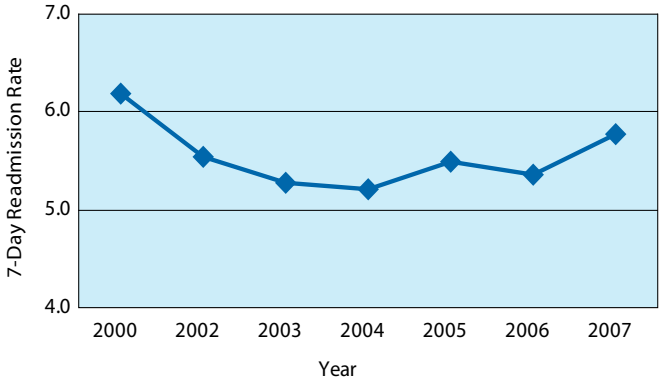
Note: The tables above include data for each year that PHC4 published readmission rates for valve procedures.

Readmissions – CABG Surgery

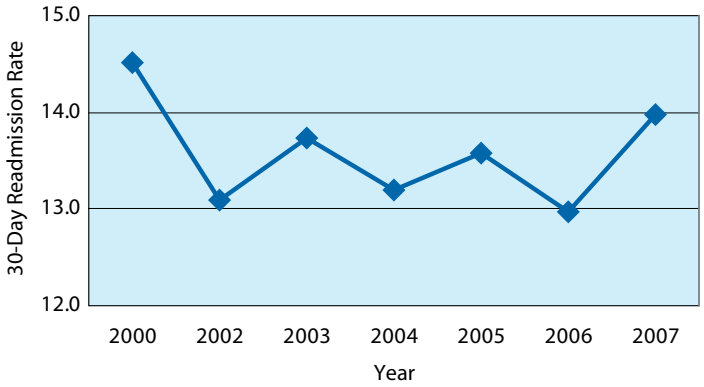
- For patients undergoing CABG procedures (without a valve procedure), rates for readmissions within 7 days of discharge increased between 2006 and 2007, from 5.36 percent to 5.77 percent. Overall, between 2000 (when readmissions were first reported) and 2007, 7-day readmission rates decreased 6.6 percent, from 6.18 percent to 5.77 percent.
- Between 2006 and 2007, readmission rates within 30 days of discharge for CABG procedures (without a valve procedure) increased from 12.97 percent to 13.98 percent. While 30-day readmission rates fluctuated for the years reported between 2000 and 2007, there was an overall decrease of 3.7 percent, from 14.52 percent to 13.98 percent.

Key Findings

7-Day Readmissions for CABG without Valve



30-Day Readmissions for CABG without Valve



Note: The tables above include data for each year that PHC4 published readmission rates for CABG procedures.

Reasons for Readmissions

- For patients undergoing CABG procedures (without a valve procedure) from 2000 through 2007, the top reason for readmissions within 7 days has fluctuated between infections and heart failure.
- Infection has consistently been the top reason that patients have been readmitted within 30 days of CABG (without a valve procedure) from 2000 through 2007.
- For patients undergoing valve procedures (with or without CABG) from 2005 through 2007, heart failure has been the top reason that patients have been readmitted within 7 days and 30 days, followed by either infection or abnormal heartbeat (cardiac dysrhythmias).

Volume for Open Heart Surgery

- Between 2006 and 2007, the average number of open heart procedures performed by cardiothoracic surgeons declined from 114 cases per surgeon to 108 cases per surgeon—down from 149 in 2000. The average number of open heart procedures per hospital declined from 330 cases per hospital to 315 cases per hospital between 2006 and 2007—down from 499 in 2000.

Key Findings continued on page 4 ➢

Key Findings

Hospital-Acquired Infections

From 2006 to 2007, there was a 5.4 percent drop in the percent of patients who contracted infections while in the hospital for CABG and/or valve surgery. For 2007, hospitals reported that of the 15,655 patients who underwent these cardiac procedures, 933 (5.96 percent) contracted an infection[1] during their stay, a decrease from the 1,048 (6.30 percent) of hospital-acquired infections reported by hospitals for patients undergoing these procedures in 2006.

Consistent with the findings in 2006, in 2007 patients who underwent both CABG surgery and a valve procedure during the same hospitalization were the most likely to contract a hospital-acquired infection (10.14 percent), and patients who underwent CABG with no valve procedures were the least likely to contract a hospital-acquired infection (4.66 percent).

The following table displays the differences in outcomes for patients who did and those who did not contract an infection during their hospital stay. The degree to which the presence of hospital-acquired infections influenced these differences is not known.

Patients…	In-Hospital Mortality Rate	Average Post-Surgical Length of Stay		Average Hospital Charge[4]	
		Mean[2]	Median[3]	Mean[2]	Median[3]
With a Hospital-Acquired Infection	11.4%	21.5 days	16.0 days	$366,342	$256,744
Without a Hospital-Acquired Infection	1.9%	7.0 days	6.0 days	$136,924	$101,967

1 In 2006 and 2007, hospitals submitted data on the following hospital-acquired infections: urinary tract, pneumonia, bloodstream, surgical site, gastrointestinal, bone and joint, central nervous system, cardiovascular system, lower respiratory system (other than pneumonia), reproductive system, and skin and soft tissue infections.

2 This is an arithmetic mean, which is used to demonstrate the difference between actual averages for patients with and without hospital-acquired infections.

3 The median demonstrates the difference between the actual mid-ranges for patients with and without hospital-acquired infections.

4 In almost all cases, hospitals do not receive full charges from private insurance carriers or government payors; on an average basis, across all inpatient hospital cases statewide, hospitals are reimbursed or paid for approximately 27 percent of established charges.